PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference US20020244WO	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/US2004/040054	International filing date *(day/month/year)* 01.12.2004	Priority date *(day/month/year)* 01.12.2003
International Patent Classification (IPC) or national classification and IPC C12N15/861		
Applicant AVENTIS PHARMACEUTICALS INC. et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☐ *sent to the applicant and to the International Bureau)* a total of sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
31.08.2005	04.11.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Vollbach, S Telephone No. +49 89 2399- 8715

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US2004/040054

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

   Description, Pages

   1-22 as originally filed

   Claims, Numbers

   1-14 as originally filed

   Drawings, Sheets

   1/8-8/8 as originally filed

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US2004/040054

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1-14
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-14
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document/s/:

D1: DATABASE MEDLINE [Online] US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; 2002, HORWOOD NICOLE J ET AL: "High-efficiency gene transfer into nontransformed cells: utility for studying gene regulation and analysis of potential therapeutic targets." XP002327569 Database accession no. NLM12110141

D2: POPE RICHARD ET AL: "Regulation of TNF-alpha expression in normal macrophages: The role of C/EBPbeta" August 2000 (2000-08), CYTOKINE, VOL. 12, NR. 8, PAGE(S) 1171-1181 , XP002327567 ISSN: 1043-4666

D3: WAN YISONG Y ET AL: "The survival of antigen-stimulated T cells requires NfkappaB-mediated inhibition of p73 expression." March 2003 (2003-03), IMMUNITY, VOL. 18, NR. 3, PAGE(S) 331-342 , XP002327568 ISSN: 1074-7613

1. Claim 1 of the present application relates to a general method for the determination of whether a stimulus is capable of activating a candidate cis-regulatory element in an immunocyte.
The method makes use of an adenoviral vector comprising the cis-regulatory element transfected into an immunocyte.
Claim 11 is concerned with a method of inhibiting expression of a signalling pathway in an immunocyte, wherein the immunocyte is transfected by a recombinant adenovirus comprising a suppressor gene.

Methods for testing the effect of a stimulus by way of transfecting an immunocyte by an adenoviral vector are known in the art. D1 e.g. discloses effective gene transfer by adenoviral vectors for studying gene regulation in physiological circumstances. The example of this document relates to the NF-kappaB pathway. In particular, it is proposed to intervene into this pathway by inserting an inhibitor to NF-kappaB into immunocytes.
In view of this document present claims 1-14 lack novelty as required by Article 33(2) PCT.

The same applies with regard to D2 which describes a study for the regulation of TNF-alpha expression in macrophages as well as with regard to D3 which discloses the elucidation of the interaction between NfkappaB pathway and p53 mediated apoptosis, both via adenoviral transfection.

Any feature of the dependent claims which might be suitable to confer novelty to the independent claims when combined therewith, cannot be regarded to involve an inventive step as required by Article 33(3) PCT.